

10/508995

PCT/IB02/01205

Rec'd PTO 27 SEP 2004

## Statement under Article 19

## IN THE INTERNATIONAL BUREAU OF WIPO

Re: International Application No. PCT/IB02/01205

Applicant: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

International Filing Date: 25 March, 2002 (25-03-2002)

Title: ESSENTIAL OIL WITH CITRONELLOL AND ROSE OXIDES FROM  
*DRACOCEPHALUM HETEROPHYLUM BENTH* AND PROCESS THEREOF

Claim 1 has been made more specific by incorporating claim 8 describing the yield in percentage, i.e. 0.45% on fresh wt. basis. In addition to this, the main constituent of the perfumery compounds, namely citronellol and rose oxide, have also been mentioned. As such kind of disclosure was not in the cited arts, we believe that such modifications will help to overcome the Examiner's objections.

Claim 9 has also been amended by adding "oil" after ...essential ... Oil was missing from the initial set of claims. A mere typographical mistake.

The cited art relates to a bath composition with high foam forming ability used in personal hygiene, having *Dracocephalum* essential oil as one of the constituents but fails to indicate the constituents of the essential oil contributing to desired effect. Whereas, the present invention deals with extraction of essential oil from natural and cultivated species (cultivated under controlled conditions in the experimental farms) giving higher yield of citronellol, rose oxide, citronellyl acetate, geranyl acetate and citronellyl iso-butyrate.

The cited art is not disclosing any point that can be combined together with any other cited art to obtain the claimed effect. In fact, the present invention extracts the basic raw material, i.e. the essential oil with different constituents in high perfumery compound ratio. The said extracted essential oil is a raw material for different useful applications and the cited art is just one use of the extracted oil.

As the objectives of the present art is extraction of essential oil from the natural and cultivated plant and that of the cited art is its useful applications, both the documents are directing towards entirely different concept. In view of the above statement, we respectfully submit that obviousness rejection is invalid.

**AMENDED CLAIMS**

[received by the International Bureau on 25 July 2003 (25.07.03);  
original claims 1-11 replaced by amended claims 1-11 (2 pages)]

**CLAIMS**

1. An essential oil mixture yield of about 0.45% on fresh wt. basis obtained from natural and cultivated cold desert plant *Dracocephalum heterophyllum Benth* having high value of perfumery compounds namely citronellol and rose oxide, said essential oil mixture obtained from:
  - (i) a natural plant comprising:  
cis-rose oxide 1.6%, trans-rose oxide 0.5%, citronellal 6.7%, citronellol 74.9%, geranal 1.5%; citronellyl acetate 6.7%, neryl acetate 0.7%, geranyl acetate 1.3%, spathulenol 1.5%, citronellyl-isobutyrate 0.8%, citronellol formate 0.2% and α-bourbonene 0.4%.
  - (ii) a cultivated plant comprising:  
benzaldehyde 0.2%, 6-methylheptanone 0.2%, α-pinene 0.5%, β-pinene 0.2%, linalool 0.8%, cis-rose oxide 0.6%, trans-rose oxide 0.3%, citronellal 2.5%, citronellol 54.3%, nerol 1.2%, geranal 2.4%, geraniol 1.9%, citronellyl acetate 21.6%, neryl acetate 0.4%, geranyl acetate 11.7%, β-farnesene 0.1%, δ-elemene 0.5%, spathulenol 0.2% and citronellyl-isobutyrate 0.3%
2. The essential oil mixture according to claim 1, wherein the constituents of said essential oil mixture are identified by Gas Chromatography (GC) and Gas Chromatography Mass Spectra (GCMS).
3. The essential oil mixture according to claim 1, wherein said oil mixture content is a new commercial source for citronellol.
4. The essential oil mixture according to claim 1, wherein said oil mixture content is a new commercial source for cis and trans rose oxides.
5. The essential oil mixture according to claim 1, wherein said oil mixture content is a new commercial source for citronellyl acetate, geranyl acetate and citronellyl isobutyrate.
6. The essential oil mixture according to claim 1, wherein the yields of citronellol and rose oxide thus obtained are substantially higher than from any other *Dracocephalum* species.
7. The essential oil mixture according to claim 1, wherein the chemo-type containing highest content of citronellol and rose oxides is designated as 6th type of chemo-type and named as citronellol, rose oxide type.
8. A process of extraction of essential oil mixture from a new plant source, *Dracocephalum heterophyllum Benth*, said process comprising the steps of:

- (a) charging plant material with water in a round bottom flask attached to Clevenger type apparatus;
  - (b) heating the plant material to a boiling temperature;
  - (c) condensing the vapor to separate the volatile oil mixture from the upper layer of distillate to obtain the essential oil mixture;
9. A process according to claim 8, wherein the essential oil mixture yield from *D. heterophyllum* is about 0.45% on fresh wt. basis.
10. A process according to claim 8, wherein the plant material is selected from the whole plant.
11. A process according to claim 8, wherein the plant material is used obtained both from high altitude natural plants and from low altitude cultivated plants.

REPLACED BY  
ATT 84 AND 1

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DT04 Rec'd PCT/PTO 27 SEP 2004

Statement under Article 34

IN THE INTERNATIONAL BUREAU OF WIPO

Re: International Application No. PCT/IB02/01205

Applicant: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

International Filing Date: 25 March, 2002 (25-03-2002)

Title: ESSENTIAL OIL WITH CITRONELLOL AND ROSE OXIDES FROM  
*DRACOCEPHALUM HETEROPHYLUM BENTH* AND PROCESS THEREOF

With reference to the second written opinion mailed 28 April, 2004 drawn for the case, the applicant provides the following clarification:

**First and foremost, the characterizing point of the present invention is the identification of a new chemotype plant and novel essential oil mixture obtained from the new chemo-type. There are only five known classifications, on the basis of major chemical constituents, of *Dracocephalum* species. Whereas, the present compound invents a novel chemotype of *Dracocephalum* species with citronellol and rose oxide as a major constituent and named as 6<sup>th</sup> type of chemotype. The applicant wish to inform the Examiner that this is the first time that such a chemotype has been obtained and identified which has citronellol and rose oxide as major constituent, which in itself is a novel and inventive work. The claims are amended to focus on new chemotype species. Further, for the first time the novel essential oil mixture is obtained which is not from hitherto. This involved much of human interference and experimental analysis to arrive at the present invention. Furthermore, the essential oil mixture and the ingredients of the present invention have a high yield than the prior arts. In fact, isolation or extraction of these ingredients is much easier and cost effective when compared to the prior art mixtures. The novel essential oil mixture is unique in the since that the desired ingredients are available in higher quantum and this is much desired by the users and the industry.**

Although, the citations refer to citronellol as one of the part but none of the citation is focussing on the derivation of a novel chemotype, which has been disclosed in the present invention. therefore, the approach of the invention and the citation is mutually exclusive with no overlapping features. We also provide justification with respect to individual citations and their combinations.

D1: XP002221252

The cited art, although, refers to an essential oil of *Dracocephalum Heterophyllum Benth*. But, it fails to provide any reference to perfumery effect of the essential oil. However, the citation deals with the identification of compounds containing terpenes and their application for medicinal

purposes. Whereas, the present invention describes perfumery effect of the claimed compound due to the combined effect of high quantity of citronellol and rose oxide. In the absence of any reference to rose oxide and the citronellol in the citation, the applicant believes that the citation cannot be used to challenge the present case.

**D2: XP-002221255**

The cited art relates to a bath composition with high foam forming ability used in personal hygiene, having *Dracocephalum* essential oil as one of the constituents but fails to indicate the constituents of the essential oil contributing to desired effect. Whereas, the present invention, as already described relates to high perfuming effect of compound owing to rose oxide and citronellol. The only reference given in the prior art indicates use of separate perfuming agent for providing perfumery effect. The essential oil of the herb, although used, fails to give any indication of the purpose of use. As a separate perfuming agent is used in the bath composition, it is obvious that the essential oil of the herb is not contributing as a perfumery agent.

**D3: XP 002221256**

In the present citation, the focus is also on a different issue namely controlling arterial pressure. This is effected by a beverage containing *Dracocephalum* herb extract and 'lemon' artemisia essential oil. Therefore, it is totally distinct from the present invention. Furthermore, the said essential oils contribute to the stability of the beverage, which is obviously different from the present case. We reiterate that the use of the compound in the present invention is for perfumery activity because of the presence of high quantity of rose oxide and citronellol.

In other words, all the citations refer to a different application of compounds. The said compounds have essential oil of *Dracocephalum Heterophyllum Benth* as one of the ingredients. None of the citation refers to use of essential oil as a perfuming agent. The perfuming activity of the compound is because of high quantity citronellol and rose oxide in the compound. As, none of the citation indicated 'rose oxide', as one of the ingredients, no person skilled in the art will ever be encouraged to combine the marked citations to come up with the present invention. Infact, the work conveyed in the citation can never be meaningfully combined as the application of the composition are entirely different and no specific reference is given to the contribution of essential oil of *Dracocephalum Heterophyllum Benth* in the said compositions.

Therefore, the applicant believes that even after combining all the citations in all possible combinations, presently claimed invention and perfumery effect is not achievable. Hence, the citations are not at all relevant to the present case and should not be taken into account to judge the novelty and inventiveness of the present case.

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AFT 34 AMDT

## CLAIMS

1. An essential oil obtained from natural and cultivated cold desert plant *Dracocephalum heterophyllum Benth* having high value of perfumery compounds, said essential oil obtained from:
  - 5 (i) a natural plant comprising:  
cis-rose oxide 1.6%, trans-rose oxide 0.5%, citronellal 6.7%, citronellol 74.9%, geranal 1.5%, citronellyl acetate 6.7%, neryl acetate 0.7%, geranyl acetate 1.3%, spathulenol 1.5%, citronellyl-isobutyrate 0.8%, citronellol formate 0.2% and α-bourbonene 0.4%.
  - 10 (ii) a cultivated plant comprising:  
benzaldehyde 0.2%, 6-methylheptanone 0.2%, α-pinene 0.5%, β-pinene 0.2%, linalool 0.8%, cis-rose oxide 0.6%, trans-rose oxide 0.3%, citronellal 2.5%, citronellol 54.3%, nerol 1.2%, geranal 2.4%, geraniol 1.9%, citronellyl acetate 21.6%, neryl acetate 0.4%, geranyl acetate 11.7%, β-farnesene 0.1%, δ-elemene 0.5%, spathulenol 0.2% and citronellyl-isobutyrate 0.3%
2. The essential oil according to claim 1, wherein the constituents of said essential oil are identified by Gas Chromatography (GC) and Gas Chromatography Mass Spectra (GCMS).
- 20 3. The essential oil according to claim 1, wherein said oil content is a new commercial source for citronellol.
4. The essential oil according to claim 1, wherein said oil content is a new commercial source for cis and trans rose oxides.
- 25 5. The essential oil according to claim 1, wherein said oil content is a new commercial source for citronellyl acetate, geranyl acetate and citronellyl iso-butyrate.
6. The essential oil according to claim 1, wherein the yields of citronellol and rose oxide thus obtained are substantially higher than from any other *Dracocephalum* species.
- 20 7. The essential oil according to claim 1, wherein the chemo-type containing highest content of citronellol and rose oxides is designated as 6th type of chemo-type and named as citronellol, rose oxide type.
8. The essential oil according to claim 1, wherein the essential oil yield from *D. heterophyllum* is about 0.45% on fresh wt. basis.
- 25 9. A process of extraction of essential from a new plant source, *Dracocephalum heterophyllum Benth*, said process comprising the steps of:

- (a) charging plant material with water in a round bottom flask attached to Clevenger type apparatus;
  - (b) heating the plant material to a boiling temperature;
  - (c) condensing the vapor to separate the volatile oil from the upper layer of distillate to obtain the essential oil;
- 5        9. A process according to claim 9, wherein the essential oil yield from *D. heterophyllum* is about 0.45% on fresh wt. basis.
- 10      10. A process according to claim 9, wherein the plant material is selected from the whole plant.
- 10      11. A process according to claim 9, wherein the plant material is used obtained both from high altitude natural plants and from low altitude cultivated plants.

## PATENT COOPERATION TREATY

PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 10 JUN 2004

PCT

Applicant's or agent's file reference IN/PA-98	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA4/16)
International application No. PCT/IB 02/01205	International filing date (day/month/year) 25.03.2002	Priority date (day/month/year) 25.03.2002
International Patent Classification (IPC) or both national classification and IPC C11B9/02, C11B9/02		
Applicant <b>COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the opinion
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 14.10.2003	Date of completion of this report 09.06.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Couzy, F Telephone No. +49 89 2399-7503



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/IB 02/01205

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-5 as originally filed

**Claims, Numbers**

1-11 filed with telefax on 27.05.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/IB 02/01205

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes:	Claims	1-11
	No:	Claims	
Inventive step (IS)	Yes:	Claims	6-7
	No:	Claims	1-5,8-11
Industrial applicability (IA)	Yes:	Claims	1-11
	No:	Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB 02/01205

**Re Item I**

Basis of the opinion

I.1 The current set of claims was allowed into the procedure although:

- the word "cold" has been forgotten from the wording of independent claim 1. Indeed, the whole application as filed provides support for essential oil extracts obtained from **cold** desert plants. Since a correct amendment is mentioned on the marked-up copy filed at the same time, this is judged to be an involuntary mistake.
- the word "oxide" has been forgotten when defining the new chemo-type mentionned in independent claim 1, which must be of the citronellol - rose **oxide** type, as clear from the description on p.2 li.21-22.

These omissions introduce lack of clarity (Art. 6 PCT) and might also be considered to contradict Art. 34 (2) b PCT, and have to be corrected upon entry in national phases.

**Re Item V**

Reasoned statement under Art. 35 (2) PCT with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

V.1 Reference is made to the following documents:

D1: XP002221252

D2: XP002221255

D3: XP002221256

D4: XP002221253

D5: XP002221254

(same and in the same order as cited in the International Search Report)

**V.2 Novelty and inventive step**

V.2.1 It is first to be noted that the feature of independent claim 1 which relates to the yield of extraction ("yield of about 0.45% on fresh wt. basis") is obviously a feature of the process by which the product is obtained, and not a feature of the essential oil obtained. It is therefore not a distinguishing feature. Similarly, the feature of claim 2 does not help characterizing the claimed product.

V.2.2 It is clear from D1 that essential oils extracted from *Dracocephalum heterophyllum* Benth are known, as this document mentions that such an oil has been analyzed. Further, the essential oil mentioned in D1 contains 50% of citronellol, thus it must also be considered that that variety is also of the same chemotype as that of the

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB 02/01205

variety of the invention. Thus, the subject-matter of independent claim 1 only differs from the essential oil of D1 by the presence of slightly higher levels of citronellol, and possibly, differences in the other compounds. Since differences in the levels of the compounds of interest are anyway to be expected between varieties of the same plants, and in the regrettable absence of a clear characterization of the plant variety tested, the subject-matter of independent claim 1 (although new in the sense of Art. 33.2 PCT) is considered not to involve an inventive step in the sense of Art. 33.3 PCT.

The features of claims 2-4 can not be considered to be technical features which allow to characterize the essential oil itself (see also V.2.1). Thus, the subject-matter of claims 2-4 also does not involve an inventive step (Art. 33 (3) PCT).

The uses according to claim 5-7 is suggested by D1. This is apparently not the case for the uses according to claims 6 and 7, which are also not derivable from the other prior art documents. Thus, the subject-matter of these claims might be considered to involve an inventive step in the sense of Art. 33.3 PCT.

V.2.3 The process according to claim 8 appears to be a very usual steam extraction process. A man skilled in the art having knowledge of D1 or D4 would therefore use it without the exercise of inventive skills for the preparation of an essential oil of *Dracocephalum heterophyllum* Benth. Accordingly, the additional technical features of the other process claims 9-11 can not provide an inventive step in the sense of Art. 33 (3) PCT.

V.3 The subject-matter of all claims is industrially applicable in the sense of Art. 33 (4) PCT.

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**CLAIMS**

1. A novel essential oil mixture obtained from new chemo-type namely citronellol-rose oil type of natural and cultivated desert plant *Dracocephalum heterophyllum Benth.* having high value of perfumery compounds, yield of about 0.45% on fresh wt. basis, said essential oil mixture obtained from:
  - (i) a natural plant comprising:
 

cis-rose oxide 1.6%, trans-rose oxide 0.5%, citronellal 6.7%, citronellol 74.9%, geranal 1.5%, citronellyl acetate 6.7%, neril acetate 0.7%, geranyl acetate 1.3%, spathulenol 1.5%, citronellyl-isobutyrate 0.8%, citronellol formate 0.2% and α-bourbonene 0.4%.
  - (ii) a cultivated plant comprising:
 

benzaldehyde 0.2%, 6-methylheptanone 0.2%, α-pinene 0.5%, β-pinene 0.2%, linabool 0.8%, cis-rose oxide 0.6%, trans-rose oxide 0.3%, citronellal 12.5%, citronellol 54.3%, nerol 1.2%, geranal 2.4%, geraniol 1.9%, citronellyl acetate 21.6%, neril acetate 0.4%, geranyl acetate 11.7%, β-farnesene 0.1%, δ-elemene 0.5%, spathulenol 0.2% and citronellyl-isobutyrate 0.3%
2. The essential oil mixture according to claim 1, wherein the constituents of said essential oil mixture are identified by Gas Chromatography (GC) and Gas Chromatography Mass Spectra (GCMS).
3. The essential oil mixture according to claim 1, wherein the yields of citronellol and rose oxide thus obtained are substantially higher than from any other *Dracocephalum* species.
4. The essential oil mixture according to claim 1, wherein the chemo-type containing highest content of citronellol and rose oxides is designated as 6th type of chemo-type and named as citronellol-rose oxide type.
5. Use of an essential oil mixture according to claim 1, wherein said oil mixture content is a new commercial source for obtaining citronellol.
6. Use of an essential oil mixture according to claim 1, wherein said oil mixture content is a new commercial source for obtaining cis and trans rose oxides.
7. Use of an essential oil mixture according to claim 1, wherein said oil mixture content is a new commercial source for obtaining citronellyl acetate, geranyl acetate and citronellyl iso-butyrate.
8. A process of extraction of essential oil mixture from a new plant source, *Dracocephalum heterophyllum Benth.*, said process comprising the steps of:

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- (a) charging plant material with water in a round bottom flask attached to Clevenger type apparatus;
- (b) heating the plant material to a boiling temperature;
- (c) condensing the vapor to separate the volatile oil mixture from the upper layer of distillate to obtain the essential oil mixture;
9. A process according to claim 8, wherein the essential oil mixture yield from *D. heterophyllum* is about 0.45% on fresh wt. basis.
10. A process according to claim 8, wherein the plant material is selected from the whole plant.
11. A process according to claim 8, wherein the plant material is used obtained both from high altitude natural plants and from low altitude cultivated plants.

## INTERNATIONAL SEARCH REPORT

Inte  
onal Application No  
PCT/IB 02/01205

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C11B9/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

CHEM ABS Data, WPI Data, EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>DATABASE CA 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; LU, MAN ET AL: "Analysis of essential oil of <i>Dracocephalum heterophyllum</i> Benth" retrieved from STN Database accession no. 133:139984 XP002221252 cited in the application abstract &amp; YAOXUE XUEBAO (1999), 34(12), 925-927 ,</p> <p style="text-align: center;">-/-</p>	1-10

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
- \*L\* document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the International filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*8\* document member of the same patent family

Date of the actual completion of the International search	Date of mailing of the International search report
18 November 2002	29/11/2002
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl. Fax: (+31-70) 340-3016	Authorized officer  Dauksch, H

## INTERNATIONAL SEARCH REPORT

Int'l Application No  
PCT/IB 02/01205

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>DATABASE WPI            Section Ch, Week 198744            Derwent Publications Ltd., London, GB;            Class D21, AN 1987-312128            XP002221255            &amp; SU 1 291 146 A (CHEM IND RES INST),            23 February 1987 (1987-02-23)            abstract</p> <p>—</p>	1-10
A	<p>DATABASE WPI            Section Ch, Week 198850            Derwent Publications Ltd., London, GB;            Class D13, AN 1988-359327            XP002221256            &amp; SU 1 400 599 A (AS MOLD BOTANIC GAR),            7 June 1988 (1988-06-07)            abstract</p> <p>—</p>	1-10
A	<p>DATABASE CA 'Online!            CHEMICAL ABSTRACTS SERVICE, COLUMBUS,            OHIO, US;            QIN, BO ET AL: "Essential chemical            constituents of <i>Dracocephalum</i>  <i>heterophyllum</i> Benth"            retrieved from STN            Database accession no. 133:220201            XP002221253            abstract            &amp; TIANRAN CHANWU YANJIU YU KAIFA (2000),            12(1), 4-11 ,</p> <p>—</p>	1-10
A	<p>DATABASE CA 'Online!            CHEMICAL ABSTRACTS SERVICE, COLUMBUS,            OHIO, US;            BUDANTSEV, A. L. ET AL: "Chemical            composition and useful properties of  <i>Dracocephalum</i> L. species of U.S.S.R.            flora. I. Contents and composition of            essential oils"            retrieved from STN            Database accession no. 106:99374            XP002221254            abstract            &amp; RASTITEL'NYE RESURSY (1986), 22(4),            550-61 ,</p> <p>—</p>	1-10

## INTERNATIONAL SEARCH REPORT

Int'l. Application No.  
PCT/IB 02/01205

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
SU 1291146	A	23-02-1987	SU	1291146 A1		23-02-1987
SU 1400599	A	07-06-1988	SU	1400599 A1		07-06-1988

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## INTERNATIONAL SEARCH REPORT

Inte  
n  
onal Application No  
PCT/IB 02/01205A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 C11B9/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

CHEM ABS Data, WPI Data, EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>DATABASE CA 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; LU, MAN ET AL: "Analysis of essential oil of <i>Dracocephalum heterophyllum</i> Benth" retrieved from STN Database accession no. 133:139984 XP002221252 cited in the application abstract &amp; YAOXUE XUEBAO (1999), 34(12), 925-927 ,</p> <p>----</p> <p>-/-</p>	1-10

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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Date of the actual completion of the International search  18 November 2002	Date of mailing of the International search report  29/11/2002
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl. Fax: (+31-70) 340-3016	Authorized officer  Dauksch, H

## INTERNATIONAL SEARCH REPORT

Int'l Application No
PCT/IB 02/01205

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p><b>DATABASE WPI</b>          Section Ch, Week 198744          Derwent Publications Ltd., London, GB;          Class D21, AN 1987-312128          XP002221255          &amp; SU 1 291 146 A (CHEM IND RES INST),          23 February 1987 (1987-02-23)          abstract</p> <p>---</p>	1-10
A	<p><b>DATABASE WPI</b>          Section Ch, Week 198850          Derwent Publications Ltd., London, GB;          Class D13, AN 1988-359327          XP002221256          &amp; SU 1 400 599 A (AS MOLD BOTANIC GAR),          7 June 1988 (1988-06-07)          abstract</p> <p>---</p>	1-10
A	<p><b>DATABASE CA 'Online!'</b>          CHEMICAL ABSTRACTS SERVICE, COLUMBUS,          OHIO, US;          QIN, BO ET AL: "Essential chemical          constituents of <i>Dracocephalum</i>  <i>heterophyllum</i> Benth"          retrieved from STN          Database accession no. 133:220201          XP002221253          abstract          &amp; TIANRAN CHANWU YANJIU YU KAIFA (2000),          12(1), 4-11 ,</p> <p>---</p>	1-10
A	<p><b>DATABASE CA 'Online!'</b>          CHEMICAL ABSTRACTS SERVICE, COLUMBUS,          OHIO, US;          BUDANTSEV, A. L. ET AL: "Chemical          composition and useful properties of  <i>Dracocephalum</i> L. species of U.S.S.R.          flora. I. Contents and composition of          essential oils"          retrieved from STN          Database accession no. 106:99374          XP002221254          abstract          &amp; RASTITEL'NYE RESURSY (1986), 22(4),          550-61 ,</p> <p>-----</p>	1-10

**INTERNATIONAL SEARCH REPORT**Int'l. Appl. No.  
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Patent document cited in search report	Publication date		Patent family member(s)	Publication date
SU 1291146	A	23-02-1987	SU 1291146 A1	23-02-1987
SU 1400599	A	07-06-1988	SU 1400599 A1	07-06-1988